

REMARKS

Applicant respectfully requests reconsideration and allowance of the subject application. Claim 1, 2, 3, 4, 8, 11, 13, and 16 have been amended. The currently pending claims are all now in condition for allowance.

ALLOWABLE SUBJECT MATTER

Claims 5-10, 13-15, and 18-19 have been allowed, subject to resolution of the claim objections discussed below. Applicant appreciates the indication of allowability.

Claims 1, 3, 11, 12, 16, and 17 are indicated as being allowable if appropriate corrections are made to cure the defects raised under 35 U.S.C. §112. Applicant again appreciates the indication of allowability.

CLAIM OBJECTIONS

Claims 13-17 have been objected to because there is insufficient antecedent basis for the “digital broadcasting transmitter” as recited in claims 14-17. In accordance with the Examiner’s suggestion, claim 13 has been amended to replace “digital broadcasting system” with “digital broadcasting transmitter.”

35 U.S.C. §112 CLAIM REJECTIONS

The Examiner has rejected claims 1, 3, 11, 12, 16, and 17 under 35 U.S.C. §112, second paragraph, as being indefinite. Specifically, the Examiner indicates that the term “sufficient” is a relative term which renders the claim indefinite. In order to overcome the rejection, the term “sufficient” has been deleted. As illustrated in Figure 8 and described on page 8, lines 9-12 of the specification, the present invention combines a synchronization pattern 52, variable length frame

information 55, variable length data frame 54 with random data 56 to create a master fixed length frame 58 that has no unused bits. The amount of random data bits used is calculated to produce fixed length frames to achieve the desired objective, i.e., no unused bits in the master fixed frame.

Accordingly, claims 1 and 3 have been amended to recite:

a quantity of random data, said quantity calculated to produce a plurality of fixed length frames comprising a second number of bits; and
filling said fixed length master frame with said plurality of fixed length frames, such that said first number of bits in said fixed length master frame equals the total second number of bits in said plurality of fixed length frames;... .

Similarly, claims 11 and 16 have been amended to recite:

wherein said formatter formats said fixed length master frame by padding each of said plurality of variable length data frames with one of said plurality of synchronization patterns and at least one of said plurality of random data bits to produce a plurality of fixed length frames, said fixed length frames comprising a second number of bits, and filling said fixed length master frame with said plurality of fixed length frames, such that said first number of bits in said fixed length master frame equals said second number of bits in said plurality of fixed length frames... .

Thus, the term “sufficient” has been deleted from the amended claims without altering the meaning of the claims. The amended claims are not indefinite under 35 U.S.C. §112.

35 U.S.C. §103 CLAIM REJECTIONS

The Examiner has rejected claim 2 and claim 4 as being unpatentable over applicant's admitted prior art fig. 5 in view of applicant's background section at page 3, lines 21-22.

With respect to these claims, as amended, Applicant traverses this rejection.

The Examiner has not set forth a prima facie case of obviousness

As set forth in the MPEP:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combined reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

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Claim 2 and claim 4 each recite:

...determining the existence of at least one unused bit, said unused bit comprising at least one bit of said first number of bits not filled by a bit of said second number of bits; and filling each of said at least one unused bit with random data, whereby randomness is increased in said first number of bits.

These steps are not taught in Applicant's admitted prior art figure 5, nor are they obvious in view of Applicant's background. Figure 5 illustrates a fixed frame that has a fixed pattern of bits (e.g., all zeros) inserted in the unused portion of the fixed frame. In the prior art, a fixed pattern such as all zeros was used to indicate the absence of data in the unused portion of the fixed frame (see page 3, lines 17-19). While Applicant recites the well known principle that overall system efficiency is maximized in a system that transmits modulated signals by maximizing the randomness of the total signal to be transmitted, this statement does not render obvious the particular method of modifying the content of the unused portions of the master frames to create an increase in randomness as recited in claims 2 and 4.

Specifically, the claimed invention uses the free portions of master frames (caused by the use of a plurality of variable length frames inserted within a fixed length master frame) to increase randomness within the fixed length master frame. Nothing in either Figure 6 or Applicant's

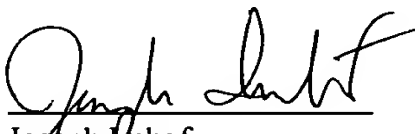
background teaches or suggests either 1) determining if any unused bits result from filling a fixed length master frame with variable length frames, or 2) filling said unused bits with random data. Merely acknowledging the fact that overall signal randomness increases system efficiency does not render obvious Applicant's method of increasing randomness by determining the presence of unused bits resulting from the insertion of variable length frames in a fixed length master frame and inserting random data in these unused bits. Because neither of these elements are not taught nor suggested in either Fig. 6 or Applicant's background section, the obviousness rejection should be withdrawn.

CONCLUSION

Pending claims 1-19 are currently in condition for allowance. Applicant respectfully requests reconsideration and issuance of the subject application. If any issues remain that preclude issuance of this application, the Examiner is urged to contact the undersigned attorney.

Respectfully submitted,

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Date


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